

## REMARKS

Claims 1-16, 26-28, and 31-35 are pending herein.

### I. The rejections of claims 31-35 under 35 U.S.C. § 112.

Applicants respectfully note that claim 31 has been amended to remove the thresholding step. Therefore, it is respectfully asserted that the § 112 rejections have been overcome.

### II. The obviousness rejections based on Javidi (US 5,903,648) in view of Marom et al. (“Analysis of Spatial-Temporal Converters for All-Optical Communication Links”).

Claims 1-16, 26-28, and 31-35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Javidi in view of Marom. Claims 1, 26, and 31 are independent claims.

A. The cited references do not teach or suggest sampling the data in the spatial domain after the data has been received and converted to the spatial domain, as claimed in claims 1, 26, and 31.

Claim 1 claims in relevant part:

“transmitting the converted encrypted data;

receiving the transmitted encrypted data and converting the received encrypted data to the spatial domain;

sampling the received encrypted data in the spatial domain after the data has been received and converted to the spatial domain.”  
(emphasis added)

Claims 26 and 31 recite similar elements. No new matter is added. Support for the amendments is found on at least on page 16, lines 23-28 of the present specification. Regarding these elements, it is respectfully asserted the cited references do not teach or suggest the claimed method quoted above.

Specifically, it is respectfully noted that Javidi does not teach or suggest anything about sampling the data. Instead, the USPTO respectfully alleges that Marom teaches the specifically claimed sampling of claims 1, 26, and 31.

For example, at page 2, line 20 through page 3, line 9 of the Office Action, the USPTO respectfully alleges that pages 2861 and 2863 of Marom teach sampling in the

temporal and spatial domains “at the transmitting end.” Specifically, page 2, line 21 and page 3, lines 5-6 of the Office Action expressly note that the alleged sampling in Marom occurs at the transmitting end.

However, it is respectfully important to note that the alleged sampling in Marom only occurs before the transmission of data, and Marom does not teach or suggest sampling in the spatial domain at the receiving end. In other words, Marom does not teach or suggest sampling the data in the spatial domain after the data has been received and converted to the spatial domain, as claimed in claims 1, 26, and 31.

Furthermore, page 3 of the Office Action also notes the temporal factor  $K_n(t)$  described on page 2863 of Marom. However, temporal factor  $K_n(t)$  of Marom cannot be the specifically claimed sampling in the spatial domain because temporal factor  $K_n(t)$  is only related to a temporal variable t, and not a spatial variable. Thus, temporal factor  $K_n(t)$  is not sampling “in the spatial domain,” as claimed in claims 1, 26, and 31.

The USPTO also respectfully alleges on page 3 of the Office Action that the spatial separation  $\Delta$  of Marom is used derive the value  $\Delta''$  of Marom, which is used in temporal factor  $K_n(t)$  (see page 2863 of Marom, top of right column). However, even if  $\Delta''$  is based on spatial separation  $\Delta$ , this does not mean that temporal factor  $K_n(t)$  is a spatial sampling step. Instead, it is respectfully important to note that temporal factor  $K_n(t)$  of Marom only depends on a time variable t, and thus cannot be the specifically claimed spatial sampling after receiving and converting the data as claimed in claims 1, 26, and 31.

In summary, it is respectfully important to note that Marom only allegedly teaches sampling in the spatial domain before the transmission of the data. Thus, Marom does not teach or suggest sampling the data in the spatial domain after the data has been received and converted to the spatial domain, as claimed in claims 1, 26, and 31.

In contrast, page 16, lines 23-28 of the present specification describes one possible embodiment of the claimed method quoted above. Specifically, page 16 of the present specification notes that after the data has been received and converted to the spatial domain, the data is sampled at  $x = n\Delta$ . It is respectfully important to note that this sampling in the spatial domain is performed after the data has been received and converted to the spatial domain, as claimed in claims 1, 26, and 31, and not at the transmitting end, as taught in Marom.

The claimed method quoted above is important and non-trivial because it provides significant **inherent** advantages over conventional methods. For example, the sampling in the spatial domain helps to **avoid overlap in the decryption process**. In contrast, in Marom, the data is not encrypted and there is no sampling in the spatial domain after the transmission of the data, so the method in Marom would not result in the above inherent advantages.

Thus, it is respectfully asserted that the cited references, taken either alone or in combination, do not teach or suggest all the claimed limitations of claims 1, 26, and 31. Therefore, it is respectfully asserted that claims 1, 26, and 31 are not obvious over the cited references.

#### C. The dependent claims.

As noted above, it is respectfully asserted that independent claims 1, 26, and 31 are allowable, and therefore it is further respectfully asserted that dependent claims 2-16, 27-28, and 32-35 are also allowable based at least on the patentability of their respective base claim.

III. Conclusion.

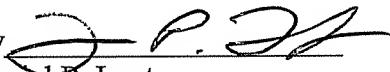
Reconsideration and allowance of all of the claims is respectfully requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Please contact the undersigned for any reason. Applicants seek to cooperate with the Examiner including via telephone if convenient for the Examiner.

Respectfully submitted,

CANTOR COLBURN LLP

By   
Daniel P. Lent  
Registration No. 44,867

Date: August 17, 2007  
CANTOR COLBURN LLP  
55 Griffin Road South  
Bloomfield, CT 06002  
Telephone (860) 286-2929  
Facsimile (860) 286-0115  
Customer No.: 23413